

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* WILLIAM P. APPS

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Appeal 2006-2032  
Application 09/891,948  
Technology Center 3700

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Decided: March 13, 2007

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Before HUBERT C. LORIN, JENNIFER D. BAHR, and  
LINDA E. HORNER, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

William P. Apps (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-36, all the claims pending in the Application. We have jurisdiction over this appeal under 35 U.S.C. § 6.

Appellant's invention is a low depth tray for bottles comprising first and second pairs of opposing walls and interior columns, wherein the interior columns have a height less than that of at least one of the pairs of opposing walls. Claim 1 is illustrative of the invention and reads as follows:

1. A low depth tray for bottles, comprising:
  - a first pair of opposed walls;
  - a second pair of opposed walls attached to the first pair of opposed walls to form a wall structure having an interior, the second pair of opposed walls longer than the first pair of opposed walls;
  - a base attached to the wall structure;
  - a plurality of interior divider walls extending upwardly from the interior of the wall structure;
  - and
  - at least one interior member projecting upwardly from the interior of the wall structure and connected to at least one divider wall, the at least one interior member having a height less than an uppermost height of the second pair of opposed walls and less than the height of bottles loaded in the tray,
- wherein the at least one interior member, the base, the divider walls, and the wall structure define a plurality of bottle retaining pockets which are each sized to receive a single bottle therein.

The Examiner relies upon the following as evidence of unpatentability:

Sauey	US 2,928,530	Mar. 15, 1960
Apps '002	US 4,978,002	Dec. 18, 1990
Apps '279	US 5,660,279	Aug. 26, 1997
McGrath	US 6,047,844	Apr. 11, 2000
Apps '793	US 6,073,793	Jun. 13, 2000
Hammett	US 6,079,554	Jun. 27, 2000

Appellant seeks review of the Examiner's rejections under 35 U.S.C. § 103(a) of claims 1-36 as unpatentable over Apps '279 in view of Hammett, McGrath, and Sauey and claims 1-10, 12-34, and 36 as unpatentable over Apps '793 or Apps '002 in view of Hammett, McGrath, and Sauey.

The Examiner provides reasoning in support of the rejections in the Answer (mailed February 2, 2006). Appellant presents opposing arguments in the Brief (filed September 9, 2004) and Reply Brief (filed March 6, 2006).

### ISSUES

The first issue before us in this appeal is whether the combined teachings of Apps '279, Hammett, McGrath, and Sauey would have suggested modifying the low depth bottle case of Apps '279 to form the interior columns 30 with a height less than the height of the columns 30 disposed along the sidewalls 12, 14, 16, 18.

The second issue before us is whether the combined teachings of Apps '793, Hammett, McGrath, and Sauey would have suggested modifying the low depth bottle case of Apps '793 to form the columns 52, 54, 56 with a height less than the height of the pylons 24, 26, 28, 30, 32 along the side walls of the case.

The third issue before us is whether the combined teachings of Apps '002, Hammett, McGrath, and Sauey would have suggested modifying the cross-stacking bottle case of Apps '002 to form the interior columns 30 with a height less than the height of the columns 30 disposed along the sidewalls 12, 14, 16, 18.

## FINDINGS OF FACT

Conventional polyethylene terephthalate (PET) beverage bottles, the types of bottles with which all three of the applied Apps patents are concerned, have a tendency to buckle under off-axis loads. Even absent buckling, the tendency of bottles to tilt in conventional low depth cases is problematic. Tilting places an undesirably low limit on the number of tiers in a stack because the tilting of bottles in one case can cause the next higher case in the stack to tilt, leading to instability if too many tiers are included in the stack (Apps '002, col. 1, l. 60 to col. 2, l. 5; Apps '279, col. 1, l. 62 to col. 2, l. 7; Apps '793, col. 1, l. 60 to col. 2, l. 4).

A low depth case is one in which the side walls are lower than the height of the stored bottles and in which the bottles support the weight of additional cases stacked on top (Apps '002, col. 2, ll. 28-31; Apps '793, col. 2, ll. 28-31; Apps '279, col. 2, ll. 29-32).

The case disclosed in Apps '002 has a very low depth with upwardly extending columns (Apps '002, col. 4, ll. 9-10). The columns 30, both along the side walls and in the interior of the case, extend above bottom portion 20 a distance approximately one third the height of the bottles to be retained in the case (Apps '002, col. 5, ll. 45-48). "This increases the effective height of the case while maintaining high bottle visibility and low manufacturing costs" (Apps '002, col. 5, ll. 48-50).

Apps '002 desires a substantially flat upper surface 22 of bottom portion 20 within bottle retaining pockets 32. This permits retention of bottles regardless of their bottom configuration and also allows petaloid bottles to be rotated within the bottle retaining pockets to facilitate display of the product (Apps '002, col. 6, ll. 16-23).

According to Apps '279, the low height of the case sidewalls and columns of Apps '002 limits the range of bottle diameters that can be retained in a stable stack because a generally snug fit is required between the bottle pocket and the bottle (Apps '279, col. 3, ll. 46-50). Apps '793 similarly points out that, because of the low height and substantially flat upper surface across the bottle retaining pockets of the case of Apps '002, a generally snug fit between the bottles and pockets is required, thereby limiting the range of bottle diameters that can be retained in the stack (Apps '279, col. 3, ll. 43-48). Apps '793 also points out that the newer two-liter bottles having smaller diameters and slightly greater height do not perform ideally within the pockets of the low depth two liter case of Apps '002 (Apps '793, col. 3, ll. 57-60).

Apps '279 addresses the bottle diameter limitation problem of Apps '002 by increasing the height of the columns 30, both along the sidewalls and in the interior of the case, to extend above the bottom portion 20 to a distance *slightly greater than* one third the height of the bottles to be retained in the case. The taller columns increase the lateral stability of the bottles within bottle retaining pockets 32. Therefore, a greater range of bottle diameters can be accommodated because a fit as snug as required in prior art cases is no longer necessary (Apps '279, col. 5, ll. 29-40). Apps '279, like Apps '002, is concerned with increasing the effective height of the case while maintaining high bottle visibility and low manufacturing costs (Apps '279, col. 5, ll. 33-35).

The columns 52, 54, 56 of Apps '793 are the same height as the pylons 24, 26, 28, 30, 32 along the side walls (Figs. 2, 3).

Apps '279 and Apps '793 disclose handles on the shorter walls of the case (Apps '279, col. 6, ll. 15-17; Apps '793, col. 6, l. 45). These handles do not extend upwardly to a height greater than the columns and pylons (Fig. 1 of Apps '279; Fig. 1 of Apps '793).

Hammett is directed to packaging of beverage containers and, specifically, to a tray for holding beverage cans during storage, shipment, and handling (Hammett, col. 1, ll. 13-16). While Hammett teaches that "the principles of the invention could be incorporated in trays having different dimensional relationships and capacities for holding different numbers of cans or other containers" (Hammett, col. 5, ll. 40-43), Hammett's preferred embodiment specifically addresses only cans.

Hammett discloses increasing the side wall height from about 2 inches to about 2 7/8 inches to lend greater stability to cans supported in the tray while still providing UPC label visibility on most major brands of beverage cans (Hammett, col. 2, ll. 58-62; col. 3, ll. 57-61; col. 9, ll. 31-34). A conventional beverage can is approximately 5.25 inches in height. Therefore, Hammett discloses a side wall height of more than half the height of a conventional beverage can. Hammett does not express any concern about can visibility beyond providing UPC label visibility.

Hammett's tray includes a plurality of upwardly extending frustoconical spacer members 21, 21A in locations between the can seating locations 20. Hammett's circular can seating areas are each defined by an annular seat 23 tapered downwardly toward its center to automatically center cans placed on the circular seating areas. Each circular can seating area 20 is dimensioned to contact and support the bottom rim of a can. The side wall of the can extends outwardly "into close proximity with" the adjoining

spacer member. The cans are thus held in their respective seating areas even if the tray is inclined at a relatively steep angle (Hammett, col. 5, l. 52 to col. 6, l. 12).

McGrath discloses a crate for beverage bottles, the crate being provided with side walls 27, end walls 26, handles on the end walls 26, and bottle support surfaces 46, in the form of a partition 47, spaced apart longitudinally from the side walls 27. As seen, for example, in Fig. 25, the partition 47 appears to have a height slightly less than that of the top of the handles on the end walls and approximately the same as the height of the side walls 27. McGrath does not disclose handles on the side walls 27.

Sauey discloses a container for packaging and storing cylindrical objects of varying diameter, the container being particularly useful for packaging shotgun shells (Sauey, col. 1, ll. 15-17). The interior of the box 10 is divided into compartments 26 by a latticework of dividing walls 18, 20 (Sauey, col. 1, ll. 60-65). The dividing walls extend upwardly from box bottom 30 to a height substantially less than the height of the opposed side walls 22, 24 of the box (Figs. 1 and 3). A plurality of finger-like depressions 31 are molded in the bottom 30 concentric with the intersection of dividing walls 18, 20. The depressions form arcuate protuberances 32 projecting into the four corners of each of the compartments 26 (Sauey, col. 2, ll. 3-12). The protuberances 32 apply pressure to an object placed into a compartment 26 to seat the object securely within a resilient embrace (Sauey, col. 2, ll. 22-26).

Sauey's box is provided with a cover 12 having sidewalls that telescope over the side walls of the box (Sauey, col. 1, ll. 47-49). Sauey gives no indication that the disclosed box 10 is intended to contain objects

having a height greater than the height of the side walls 22, 24 of the box. In fact, the height of the side walls of the cover 12, as illustrated in Fig. 1, appears to be approximately the same as that of the box side walls 22, 24, thereby indicating Sauey did not contemplate using the box to contain objects having a height greater than the height of the box side walls.

### PRINCIPLES OF LAW

Where obviousness is based on a combination of prior art references, the fact finder must determine what the prior art teaches, whether it teaches away from the claimed invention, and whether it motivates a combination of the teachings of the references to arrive at the claimed invention. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1363, 80 USPQ2d 1641, 1647 (Fed. Cir. 2006).

To establish obviousness based on a combination of elements disclosed in the prior art, there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by Appellant. The motivation, suggestion, or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved. In addition, the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. *See In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000).

### ANALYSIS

It is readily apparent from Apps '002, Apps '279, and Apps '793 that any tilting of the conventional plastic beverage bottles with which the



applied Apps patents are concerned in stacked low depth cases is very problematic and that the three applied Apps patents seek to avoid such tilting. One skilled in the art of low depth beverage bottle cases would also have understood from the three Apps patents that column and pylon heights of approximately one-third the height of the bottles to be retained in the case are sufficient to stabilize the bottles to avoid tilting, as long as the bottles fit snugly in the bottle retaining pockets, and that column and pylon heights of slightly greater than one-third the height of the bottles are sufficient to stabilize the bottles, even without a snug fit between the bottles and pockets. All of the Apps patents seek to use the lowest possible column, wall and pylon heights to maximize bottle visibility and minimize manufacturing costs while still providing sufficient stability to the bottles. Apps '279 and Apps '793 further seek to provide a case having sufficient effective height that a snug fit between the bottles and the pockets is not required. One skilled in the art would also have inferred that Apps '279 and Apps '793, like Apps '002, desire a substantially flat upper surface within the bottle retaining pockets to accommodate bottles of varying diameter and bottom configuration.

Hammett uses a wall height of over half the height of the cans, a relatively snug fit between the cans and the spacers, and a specially contoured can centering tapered annular seat to prevent sliding and hold the cans in their respective seating areas even if the tray is inclined. Hammett is not concerned with providing a substantially flat upper surface of the can seating areas or accommodating cans having different diameters or bottom rim contours. Hammett therefore utilizes a can retention structure that is very different from the bottle retention structures of the three applied Apps

patents and would not have provided any suggestion to modify the heights of the interior columns of any of the applied Apps patents as called for in Appellant's independent claims 1, 20, and 34-36.

The Examiner's position that McGrath would somehow have suggested providing a handle on the longer side walls of any of the cases of the three applied Apps patents, thereby raising their heights or the heights of the pylons along such walls to exceed the height of the interior columns, is not supported by McGrath. McGrath does not teach or suggest a handle at any location of the crate other than the end walls. Even assuming McGrath would have suggested providing a contoured handle on the end walls (i.e., the shorter walls) of any of the applied Apps patents, this would not result in the interior columns having a height less than the height of the longer opposed walls, as recited in claim 1, the interior columns having a height less than the height of the pylons, as recited in claims 20, 34, and 35, or the at least one interior member having a height less than a greatest height of the pair of opposed walls other than the pair of opposed walls having handles, as required in claim 36.

Sauey, unlike the three applied Apps patents, is not concerned with retaining articles having a height greater than the height of the side walls and dividing walls and having a tendency to tilt if not adequately supported or with vertically stacking tiers of cases of such articles, with the weight of the upper cases being supported by the articles retained in the cases stacked beneath said upper cases. Accordingly, the relative heights of the interior dividing walls and box side walls taught by Sauey would have little, if any, relevance to one of ordinary skill in the art designing a low depth bottle case of the type disclosed in the applied Apps patents.

For the above reasons, we conclude that:

1. the combined teachings of Apps '279, Hammett, McGrath, and Sauey would not have suggested modifying the low depth bottle case of Apps '279 to form the interior columns 30 with a height less than the height of the columns 30 disposed along the sidewalls 12, 14, 16, 18;
2. the combined teachings of Apps '793, Hammett, McGrath, and Sauey would not have suggested modifying the low depth bottle case of Apps '793 to form the columns 52, 54, 56 with a height less than the height of the pylons 24, 26, 28, 30, 32 along the side walls of the case; and
3. the combined teachings of Apps '002, Hammett, McGrath, and Sauey would not have suggested modifying the cross-stacking bottle case of Apps '002 to form the interior columns 30 with a height less than the height of the columns 30 disposed along the sidewalls 12, 14, 16, 18.

In light of the above, none of the Examiner's rejections can be sustained.

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ORDER

The decision of the Examiner to reject claims 1-36 is reversed.

REVERSED

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